

APPENDIX

1. A method of imaging and erasing an erasable printing form, comprising the steps of:

electrically charging the printing form over its entire surface;

applying liquid toner particles, which have one of individual charges opposite the charges of the printing form, and dipole and multi-dipole moments directed opposite the charges of the printing form, to the printing form so that the toner particles are attracted to the entire surface of the printing form to form a layer;

controlling the thickness of the layer of liquid toner particles for controlling one of voltage and time during the charging step;

fixing the liquid toner particles with a source of energy in accordance with a picture to be printed; one of removing and breaking down non-fixed liquid toner particles to change ink acceptance behavior of the layer ; and erasing the printing form as a whole, after an end of a printing process, by removing the fixed liquid toner particles.

2. A method according to Claim 1, including, for imaging, fixing the liquid toner particles on image locations of the printing form and, in corresponding manner, removing the liquid toner particles from the non-image locations.

3. A method according to Claim 1, wherein the charging step includes charging a printing form having a conductive surface.

4. A method according to Claim 3, wherein the charging step includes charging a metal printing form.

5. A method according to Claim 1, wherein the charging step includes charging a printing form that has a dielectric on its surface.

6. A method according to Claim 5, including charging the dielectric surface of the printing form by corona charging.

7. A method according to claim 1, wherein the fixing step includes fixing a layer of the liquid toner particles applied to the surface of the printing form with a beam of electromagnetic waves.

8. A method according to Claim 7, wherein the fixing step includes fixing the liquid toner particles with a laser beam.

9. A method according to Claim 7, wherein the fixing step includes fixing the liquid toner particles with a beam in the infrared region.

10. A method according to Claim 1, including providing one of the liquid toner particles and the printing form with an absorber material for absorbing the energy.

12. A method according to Claim 1, wherein the removing step includes removing the liquid toner particles which are not fixed on the surface of the printing form by one of a mechanical force, a solvent which is applied under pressure, absorption, an electric field, and ultrasonics.

13. A method according to Claim 7, and further comprising the step of additionally fixing portions of the layer which have remained on the surface of the printing form by full-surface treatment with radiation.

14. a method according to Claim 13, wherein the additional fixing step includes fixing the portions of the layer which have remained on the surface of the printing form with heat radiation. 11

15. A method according to claim 1, and further comprising the step of hydrophilizing regions of the printing form which are not covered by the liquid toner particles for wet offset printing.

16. A method according to Claim 1, wherein the fixing step includes fixing the liquid toner particles using a focused non-coherent light source for cross-linking the liquid toner particles on the surface of the printing form.

17. A method according to Claim 16, wherein the fixing is carried out using a mercury-vapor lamp.

18. A method according to Claim 1, wherein the removing step includes ablating the liquid toner particles from the surface of the printing form using a focused and non-coherent light source.

19. A method according to Claim 1, wherein the erasing step includes removing a remainder of the layer of fixed particles with one of a solvent, an acid, an alkaline aqueous solution, a mechanical force, a high temperature, high-energy radiation, and ultrasonics.

20. A method according to Claim 1, wherein the erasing step includes removing the remaining layer of fixed particles with an organic solvent.

21. A method according to Claim 19, wherein the erasing step includes removing the remaining layer of fixed particles with one of an acid and an alkaline aqueous solution under high pressure, so that the particles are dissolved.

22. A method according to Claim 19, wherein the erasing step includes removing the remaining of the layer of fixed particles with one of a brush and a cleaning cloth.

29. A method according to claim 1, including, for imaging, fixing the liquid toner particles on non-image locations of the printing form and, in a corresponding manner, removing the liquid toner particles from image locations.